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STITES & HARBISON PLLC
1199 NORTH FAIRFAX STREET
SUITE 900
ALEXANDRIA, VA 22314

EXAMINER	
MURPHY, KEVIN F	
ART UNIT	**PAPER NUMBER**
3753	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,177	PEATTIE ET AL.	
	Examiner	Art Unit	
	KEVIN MURPHY	3753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/16/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-24 are pending for consideration.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 17 and 21-24** rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 17 recites the limitation "the hydraulic chamber" in line 3. There is insufficient antecedent basis for this limitation in the claim.

4. Claim 21 recites the limitation "the piston housing of the valve body" in line 1. There is insufficient antecedent basis for this limitation in the claim.

5. Claims 22-24 are rejected for being dependent on an indefinite base claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-11** are rejected under 35 U.S.C. 102(b) as being anticipated by Elsdon et al. (US Patent 5813432).

8. Regarding Claim 1, Elsdon discloses a valve comprising a valve body **10** having an elongate fluid passageway **20** defining an inlet **11** and an outlet (outlet chamber **24**)

at its respective ends (Figure 1); an outlet valve head **41** being slidably disposed within the fluid passageway **20** for closure of the outlet **24**, the outlet valve head **41** being arranged for hydraulic actuation (via chambers **40** and **22**); and a biasing element **52** being operatively coupled to the outlet valve head **41** to urge it out of sealing engagement with the outlet **24** to permit the flow of fluid through the valve in its normally open configuration (column 8, lines 47-50).

9. Regarding Claim 2, Elsdon discloses the valve of claim 1. Furthermore, Elsdon discloses the outlet valve head **41** is connected to a piston **38** which is slidably received within a piston chamber of a piston housing **49** mounted within the valve body **10**.

10. Regarding Claim 3, Elsdon discloses the valve of claim 2. Furthermore, Elsdon discloses the biasing element **52** is located within the piston chamber (of piston housing **49**) and arranged to urge the piston **38** away from the outlet **24** and the outlet valve head **41** out of the sealing engagement with the outlet **24** wherein the valve is in the normally open configuration to allow the flow of fluid therethrough.

11. Regarding Claim 4, Elsdon discloses the valve of claim 2. Furthermore, Elsdon discloses the piston chamber (of piston housing **49**) includes a hydraulic chamber **40** being arranged so that the hydraulic fluid pressure applied to the hydraulic chamber **40** drives the piston **38** toward the outlet **24** and the outlet head **41** into sealing engagement with the outlet **24** to close the valve.

12. Regarding Claim 5, Elsdon discloses the valve of claim 1. Furthermore, Elsdon discloses an inlet valve head **26** and **32** slidably disposed within the fluid passageway **20** for closure of the inlet **11**.

13. Regarding Claim 6, Elsdon discloses the valve of claim 5. Furthermore, Elsdon discloses the inlet valve head **26** is in the form of a receiver poppet which is slidably received within a poppet chamber of a poppet housing **12** mounted within the valve body **10**.

14. Regarding Claim 7, Elsdon discloses the valve of claim 6. Furthermore, Elsdon discloses a poppet biasing element **29** located within the poppet chamber (of poppet housing **12**) and arranged to urge the receiver poppet toward and into sealing engagement with the inlet **11**.

15. Regarding Claim 8, Elsdon discloses a fluid level control system comprising a level sensor **100** being adapted to mount to a vessel **103** for sensing the level of its fluid contents; a valve **1** being adapted to connect to the vessel **103** and hydraulically coupled to the level sensor **100** to control the flow of fluid to the vessel **103**, the valve including a valve body **10** having an elongate fluid passageway **20** defining an inlet **11** and an outlet (outlet chamber **24**) at its respective ends (Figure 1); and an outlet valve head **41** being slidably disposed within the fluid passageway **20** for closure of the outlet **24**, the outlet valve head **41** of a normally open configuration wherein the outlet valve head **41** is urged out of sealing engagement with the outlet **24** to permit the flow of fluid through the valve whilst the fluid level is below a predetermined level to permit the flow of fluid to the vessel **103** whereas at or above the predetermined level the level sensor hydraulically actuates the outlet head **41** to effect closure of the valve to at least restrict the flow of fluid to the vessel **103** (column 2, lines 42-65).

16. Regarding Claim 9, Elsdon discloses the fluid level control system of claim 8. Furthermore, Elsdon discloses an inlet valve head **26** and **32** slidably and axially disposed within the passageway **20** for closure of the inlet **11**.

17. Regarding Claim 10, Elsdon discloses the fluid level control system of claim 8. Furthermore, Elsdon discloses the level control system is arranged for use in conjunction with a refueling nozzle (column 1, lines 25-38).

18. Regarding Claim 11, Elsdon discloses the fluid level control system of claim 10. Furthermore, Elsdon discloses the refueling nozzle is of a dry break configuration and designed to engage the inlet valve head to effect its opening (column 5, lines 1-5).

19. **Claims 12-15, 17 and 18** are rejected under 35 U.S.C. 102(b) as being anticipated by Yokota et al. (US Patent 6263905).

20. Regarding Claim 12, Yokota discloses a fluid level sensor comprising a float device **30** being adapted to locate within a vessel (Figure 8) for sensing the level of its fluid contents; and a level sensor valve (pilot valves **A** and **B**) coupled to or arranged to engage the float device **30**, the level sensor valve **A** and **B** being adapted to couple to a valve (main valve **1**) and the float device **30** being arranged to move said sensor valve **A** and **B** into a first position at a predetermined level of fluid within the vessel whereby the sensor valve permits the flow of hydraulic fluid to the valve **1** to effect its closure (delivering hydraulic fluid between **f** and **g** to chamber **d**).

21. Regarding Claim 13, Yokota discloses the fluid level sensor of claim 12. Furthermore, Yokota discloses the level sensor valve **A** and **B** includes a sensor body **21** having a recess within which a spool **24** is slidably housed, the spool **24** being

operatively coupled to or arranged to engage the float device via a connecting rod (spool **24** is arranged to engage the float via the connecting rod extending from **30**).

22. Regarding Claim 14, Yokota discloses the fluid level sensor of claim 13. Furthermore, Yokota discloses the sensor body **21** includes a hydraulic flow passage (passage **f** and **g**) which, with the fluid level at or above the predetermined level and the level sensor valve in the first position (flow from **g** to chamber **d**), cooperates with the recess in order to permit the flow of hydraulic fluid to the valve whereas in a second position the spool **24** prevents the flow of hydraulic fluid to the valve whilst the fluid level in the vessel is below the predetermined level (column 14, lines 21-38).

23. Regarding Claim 15, Yokota discloses the fluid level sensor of claim 14. Furthermore, Yokota discloses the body of the valve includes a sampling port **a1** operatively coupled to the level sensor valve **A** and **B** to provide hydraulic fluid to said level sensor (via line **r1**) and with the level sensor valve in the first position (delivering hydraulic fluid to chamber **d**), to redirect it to a hydraulic chamber **a2** of the valve (in said first position, hydraulic fluid flows from port **a1** into chamber **i**, then back to port **a1**, past plate **11** and into hydraulic chamber **a2**).

24. Regarding Claim 17, Yokota discloses the fluid level sensor of claim 14. Furthermore, Yokota discloses a first hydraulic return line **m** connected between a first outlet (from chamber **g**) of the hydraulic flow passage **f** and **g** and the hydraulic chamber **d** of the valve.

25. Regarding Claim 18, Yokota discloses the fluid level sensor of claim 12. Furthermore, Yokota discloses the hydraulic fluid is the fluid of the vessel (via line **q**).

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

27. **Claims 12-15 and 21-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Elsdon et al. (US Patent 5813432) in view of Yokota et al. (US Patent 6263905).

28. Regarding Claim 12, Elsdon discloses a fluid level sensor comprising a float device **102** being adapted to locate within a vessel **103** for sensing the level of its fluid contents. Although Elsdon discloses the use of a level sensor pilot valve coupled to the float device **102**, Elsdon is silent on the pilot valve permits the flow of hydraulic fluid to the valve **1** to effect its closure. Yokota also teaches a main valve member controlled by a pilot valve which is actuated by a float and further teaches the level sensor valve (pilot valves **A** and **B**) coupled to or arranged to engage the float device **30** (Figure 8), the level sensor valve **A** and **B** being adapted to couple to a valve (main valve **1**) and the float device **30** being arranged to move said sensor valve **A** and **B** into a first position at a predetermined level of fluid within the vessel whereby the sensor valve permits the flow of hydraulic fluid to the valve **1** to effect its closure (delivering hydraulic fluid to chamber **d**). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Elsdon to include the level sensor

pilot valve taught by Yokota to ensure precise fluid control in the fluid chambers **40** and **22** for actuating the valve head **41**.

29. Regarding Claim 13, Elsdon in view of Yokota discloses the fluid level sensor of claim 12. Furthermore, Elsdon in view of Yokota discloses the level sensor valve **A** and **B** includes a sensor body **21** having a recess within which a spool **24** is slidably housed, the spool **24** being operatively coupled to or arranged to engage the float device via a connecting rod (spool **24** is arranged to engage the float via the connecting rod extending from **30**).

30. Regarding Claim 14, Elsdon in view of Yokota discloses the fluid level sensor of claim 13. Furthermore, Elsdon in view of Yokota discloses the sensor body **21** includes a hydraulic flow passage (passage **f** and **g**) which, with the fluid level at or above the predetermined level and the level sensor valve in the first position (flow from **g** to chamber **d**), cooperates with the recess in order to permit the flow of hydraulic fluid to the valve whereas in a second position the spool **24** prevents the flow of hydraulic fluid to the valve whilst the fluid level in the vessel is below the predetermined level (column 14, lines 21-38).

31. Regarding Claim 15, Elsdon in view of Yokota discloses the fluid level sensor of claim 14. Furthermore, Elsdon in view of Yokota discloses the body of the valve includes a sampling port **a1** operatively coupled to the level sensor valve **A** and **B** to provide hydraulic fluid to said level sensor (via line **r1**) and with the level sensor valve in the first position (delivering hydraulic fluid to chamber **d**), to redirect it to a hydraulic

chamber **a2** of the valve (in said first position, hydraulic fluid flows from port **a1** into chamber **i**, then back to port **a1**, past plate **11** and into hydraulic chamber **a2**).

32. Regarding Claim 21, Elsdon in view of Yokota discloses the fluid level sensor of claim 15. Furthermore, Elsdon in view of Yokota discloses the piston housing **49** of the valve body **10** includes a hydraulic inlet (inlet from **p** as shown by Yokota) to which the level sensor valve is operatively coupled, the hydraulic inlet being arranged, with the level sensor valve in the second position (disconnecting **f** from **g**), to provide hydraulic fluid pressure to the piston **38** on an opposite face to the hydraulic chamber **40** whereby the hydraulic fluid assists a biasing element **52** in retaining the valve in a normally open mode.

33. Regarding Claim 22, Elsdon in view of Yokota discloses the fluid level sensor of claim 21. Furthermore, Elsdon in view of Yokota discloses the hydraulic inlet (from **p**) is coupled to a second outlet (of **f**) of the hydraulic flow passage via a second hydraulic return line **p**.

34. Regarding Claim 23, Elsdon in view of Yokota discloses the fluid level sensor of claim 22. Furthermore, Elsdon in view of Yokota discloses the spool **24** and **25** of the level sensor valve includes a throughgoing passage (passage between larger diameter lands **24** and **25** along axial length of spool) which, with said sensor valve in the second position (disconnecting **f** from **g**), cooperates with the hydraulic flow passage **f** and **g** to provide hydraulic fluid to the second outlet only (via line **p**) and thus hydraulic fluid to the opposite face of the piston **38**.

35. Regarding Claim 24, Elsdon in view of Yokota discloses the fluid level sensor of claim 21. Furthermore, Elsdon in view of Yokota discloses the piston housing **49** includes another hydraulic inlet **11** to which the sensor valve is operatively coupled (via line from **a1** as shown by Yokota) and being arranged to provide hydraulic fluid pressure to the piston **38** (via pilot valve to chamber **22**) to assist the biasing element **52** in retaining the valve in its open configuration.

36. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (US Patent 6263905) as applied to claim 15 above, and further in view of AuWerter (US Patent 3744511).

37. Regarding Claim 16, Yokota discloses the fluid level sensor of claim 15. Yokota does not disclose the sampling port is connected to an inlet of the hydraulic flow passage of the sensor body via a sampling flow line which includes an in line strainer, check valve and/or pressure accumulator. AuWerter also teaches a liquid level control system using a float **46** and further teaches the use of a strainer **49**. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Yokota to include a strainer as taught by AuWerter in the sampling flow line **r1** to ensure that the pilot valve does not become clogged with debris.

38. **Claim 19** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (US Patent 6263905) as applied to claim 18 above.

39. Regarding Claim 19, Yokota discloses the fluid level sensor of claim 18. Yokota (Figure 8) does not disclose a float chamber within which the float is located. Yokota does teach (Figure 15) a float chamber within which the float device **30b** is located, the

float chamber arranged to be flooded by the vessel fluid at the predetermined level as shown in Figure 15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Yokota (Figure 8) such that the float device **30b** is located within the float chamber as taught by Yokota in Figure 15 to provide a simpler construction to ensure the mechanical connection between the float and the spool.

40. **Claim 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokota et al. (US Patent 6263905) as applied to claim 19 above, and further in view of Lagache (US Patent 6318421).

41. Regarding Claim 20, Yokota discloses the fluid level sensor of claim 19. Furthermore, Yokota discloses the float chamber includes one or more apertures about its peripheral wall (at the top portion thereof as shown in Figure 15) and which permit flooding of the chamber. Yokota does not disclose a non return valve in its base which permits flow out of the chamber only. Lagache also teaches a fluid level sensor including a float **26** within a chamber **21** and further teaches a non return valve **34** in the base of the chamber **25** which permits flow out of the chamber only (downward as shown in Figure 1). It would have been obvious to modify the device of Yokota to provide the non return valve **34** in the chamber as taught by Lagache to allow for drainage from the chamber (Lagache; column 5, lines 23-26).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN MURPHY whose telephone number is 571-270-5243. The examiner can normally be reached on Monday-Friday 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/STEPHEN HEPPERLE/
Primary Examiner, Art Unit 3753

/KEVIN MURPHY/
Examiner, Art Unit 3753
6/04/2010